

Remarks

Claims 1-23 are pending in the application. Claims 1-3, 5, 8-10, 12, 16-18, 20 and 23 are rejected, while claims 4, 6, 7, 11, 13-15, 19, 21 and 22 are objected to. Based on the following, reconsideration of the rejected claims is requested.

Claim Rejections—35 U.S.C. § 102

The Examiner rejected claims 1-3, 5, 8-10, 12, 16-18, 20 and 23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,117,681 (Dosdall et al.). The MPEP states that "'a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.'" MPEP § 2131, 8th ed., Rev. 2 (citation omitted). The MPEP further states that "'the identical invention must be shown in as complete detail as is contained in the...claim.'" *Id.* (citation omitted). Because each of the pending claims contains elements which are neither expressly nor inherently described in Dosdall et al., Applicants submit that none of the pending claims is anticipated by that reference.

Claim 1 of the present application recites a method for controlling an engine including the steps of "determining whether an engine position sensor correction factor is known," and "discontinuing fuel to the engine if the engine position sensor correction factor is not known, and an engine shutdown is requested...." Similarly, claim 8 recites a system for controlling an engine in a vehicle including a controller that is configured to "determine whether the engine position sensor correction factors are known," and "discontinue fuel to the engine after engine shutdown is commanded and the engine position correction factors are not known...." Likewise, claim 16 recites a vehicle having a system for controlling an engine that includes a controller which is configured to "determine whether the engine position sensor correction factors are known," and "discontinue fuel to the engine after engine shutdown is commanded and the engine position correction factors are not known...."

Each of the three aforementioned independent claims contains elements which are neither expressly nor inherently described in Dosdall et al. For example, Dosdall et al. describes a method for correcting position-related errors in velocity and acceleration measurements for internal combustion engines. Dosdall et al. does not describe a method of

determining whether an engine position sensor correction factor is known, as specifically recited in claim 1. Moreover, this determination is used in the next step which positively recites "discontinuing fuel to the engine *if the engine position sensor correction factor is not known*, and an engine shutdown is requested..." (emphasis added).

Similarly, Dosdall et al. does not describe a controller that is configured to determine whether engine position sensor correction factors are known, as specifically recited in claims 8 and 16. Further, in claims 8 and 16, this determination is used by the controller which is also configured to "discontinue fuel to the engine after engine shutdown is commanded *and the engine position correction factors are not known...*" (emphasis added). Therefore, each of the independent claims of the present application contain elements which are neither expressly nor inherently described in Dosdall et al. Dosdall et al. does not show the identical invention in as complete detail as is contained in any of the independent claims, claims 1, 8 or 16. Therefore, Dosdall et al. does not anticipate any of these claims.

Claim 1 is the base claim for claims 2, 3 and 5, claim 8 is the base claim for claims 9, 10 and 12, and claim 16 is the base claim for claims 17, 18, 20 and 23. Each of these dependent claims contains all of the limitations of its respective base claim, as well as additional limitations which further distinguish it from the cited reference. For example, claim 2 recites that "the motor spins the engine at an approximately constant speed after fuel to the engine is discontinued." No such elements are expressly or inherently described in Dosdall et al. In fact, Dosdall et al. allows the engine to coastdown, and specifically states that "the velocity is not constant during the coastdown...." (Col. 5, ll. 7-8.) Similar elements are recited in claims 9 and 17 relating to the configuration of the controller, and each of the dependent claims contains elements which are neither expressly nor inherently described in Dosdall et al. Moreover, Dosdall et al. does not describe the identical invention in as complete detail as contained in any of the dependent claims. Therefore, Dosdall et al. does not anticipate any of the dependent claims.

Claim Rejections—35 U.S.C. § 103

The Examiner rejected claims 1-3, 5, 8-10, 12, 16-18, 20 and 23 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,453,864 (Downs et al.) in view of Dosdall et al. and U.S. Patent No. 6,425,365 (Peters et al.). The MPEP states that in order

to establish *prima facie* obviousness, all of the claim limitations of an invention must be taught or suggested by the prior art. MPEP § 2143.03, 8th ed., Rev. 2. In addition, the MPEP also states that "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP § 2143.01, 8th ed., Rev. 2.

As noted above, each of the independent claims, claims 1, 8 and 16, contain elements which are neither expressly nor inherently described in Dosdall et al. Similarly, each of these claims contains limitations which are neither taught nor suggested by Dosdall et al., Downs et al., or Peters et al., either alone or in combination. For example, the combination of the cited references does not teach or suggest "determining whether an engine position sensor correction factor is known," and then "discontinuing fuel to the engine if the engine position sensor correction factor is not known, and an engine shutdown is requested," as specifically recited in claim 1 of the present application. In fact, of the three cited references, Dosdall et al. is the only reference that describes the determination of position correction factors, and even in combination with the other cited references, does not teach or suggest all of the limitations of claim 1.

Similarly, claims 8 and 16 recite a controlled that is configured to "determine whether the engine position sensor correction factors are known," and to "discontinue fuel to the engine after engine shutdown is commanded and the engine position correction factors are not known...." No such limitations are taught or suggested by the combination of Dosdall et al., Downs et al. and Peters et al. As noted above, claims 1, 8 and 16 form the base claims for each of the dependent claims, which contain all of the limitations of their respective base claims, as well as additional limitations which further distinguish them from the cited references.

In addition to failing to teach or suggest all of the claim limitations of the pending claims, the desirability of combining the cited references has not been shown. As clearly stated in the MPEP, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP § 2143.01, 8th ed., Rev. 2. Applicants respectfully submit that the Examiner has not shown the desirability of combining the references, and there is no teaching, suggestion, or motivation to do so.

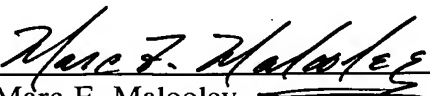
Downs et al. describes control of the rotational orientation of a crankshaft in order to rotate the crankshaft to an advantageous position for restarting the engine. Such a control system is not relevant to a method or system that uses a motor to spin an engine to facilitate determination of engine position sensor correction factors, as specifically recited in the present claims. Moreover, Dosdall et al. specifically describes a determination of correction factors when the engine velocity is not constant. This directly teaches away from some of the present claims, such as claims 2, 9 and 17, which recite spinning the engine at an approximately constant speed. Therefore, the combination of the cited references does not render the claims obvious, and with regard to claims 1-3, 5, 8-10, 12, 16-18, 20 and 23, the MPEP requirements for *prima facie* obviousness are not met.

Allowable Subject Matter

The Examiner objected to claims 4, 6, 7, 11, 13-15, 19, 21 and 22 as being dependent upon a rejected base claim, but indicated that each would be allowable if rewritten in independent form to include all of the limitations of its respective base claim and any intervening claims. Claims 1, 8 and 16 form the base claims for each of these dependent claims. As discussed above, claims 1, 8 and 16 are believed to be allowable. Therefore, withdrawal of the objections to these dependent claims is respectfully requested, as is allowance of each of the pending claims.

Respectfully submitted,

Jae Doo Chung et al.

By 
Marc F. Malooley
Reg. No. 50,624
Attorney/Agent for Applicant

Date: February 22, 2005

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: 248-358-4400
Fax: 248-358-3351